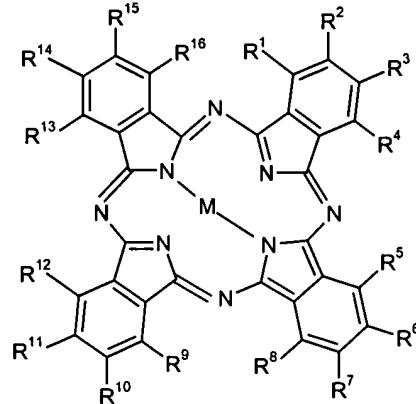


IN THE CLAIMS

1. (original): A phthalocyanine compound of Formula I



wherein at least the eight groups represented by R¹, R⁴, R⁵, R⁸, R⁹, R¹², R¹³ & R¹⁶ which groups are identical are -X-J wherein

J is selected from C₁₋₆-alkyl; C₂₋₆-alkenyl; C₄₋₈-cycloalkyl (each being optionally substituted by a group selected from C₁₋₄-alkoxy, C₁₋₄-alkylthio, C₆₋₁₂-aryl, C₆₋₁₂-arylthio, C₁₋₄-alkylsulphonyl, C₁₋₄-alkylsulphonylamino, C₁₋₄-alkylsulphoxide, amino, mono- and di-C₁₋₄-alkylamino, halogen, nitro, cyano and hydroxycarbonyl (-COOH), hydroxysulphonyl (-SO₃H) or dihydroxyphosphonyl (-PO₃H₂) or C₁₋₄-alkyl esters thereof) and from C₆₋₁₂-aryl (optionally substituted by a group selected from C₁₋₃-alkyl, C₁₋₃-alkoxy, C₁₋₃-alkylthio, C₁₋₃-alkylsulphonyl, C₁₋₃-alkylsulphonylamino, C₁₋₄-alkylsulphoxide, amino, mono- and di-C₁₋₃-alkylamino, halogen, nitro, cyano and hydroxycarbonyl, hydroxysulphonyl or dihydroxyphosphonyl, hydroxycarbonyl-C₁₋₃-alkyl, hydroxysulphonyl-C₁₋₃-alkyl, dihydroxyphosphonyl-C₁₋₃-alkyl or C₁₋₃-alkyl esters thereof);

M is an oxymetal group selected from VO, TiO and MoO;

X is S, Se, Te or NT;

T is H, alkyl or phenyl, or T & J, together with the N atom to which they are attached, form an aliphatic or aromatic ring provided this N atom is not positively charged; provided where J is aryl, T is not aryl;

and the remaining groups from R¹ to R¹⁶ are independently selected from H, halogen, -OJ, hydroxycarbonyl, hydroxysulphonyl, dihydroxyphosphonyl, hydroxycarbonyl-C₁₋₃-alkyl, hydroxysulphonyl-C₁₋₃-alkyl and dihydroxyphosphonyl-C₁₋₃-alkyl, provided that at least one of R² and R³, at least one of R⁶ and R⁷, at least one of R¹⁰ and R¹¹ and at least one of R¹⁴ and R¹⁵ is hydrogen, with the proviso that the compound is not octa-3,6-(phenylthio)VOPc, octa-3,6-(methylthio)TiOPc or octa-3,6-(ethylthio)VOPc.

2. (original): A phthalocyanine compound according to Claim 1 wherein each of R², R³, R⁶, R⁷, R¹⁰, R¹¹, R¹⁴ & R¹⁵ is H.

3. (currently amended): A phthalocyanine compound according to ~~any one preceding Claim 1~~ wherein the compound has an electronic absorption peak from 750 to 1100 nm, more preferably from 800 to 1000 nm.

4. (original): A phthalocyanine compound according to Claim 3 wherein the compound has at least 90%, preferably at least 95%, of its absorption strength in the region above 400nm at or above 750 nm.

5. (currently amended): A phthalocyanine compound according to Claim 3 or 4 wherein the electronic absorption peak has a band width at half peak height in solution of less than 60 nm.

6. (currently amended): A phthalocyanine compound according to ~~any one preceding Claim 1~~ wherein J is selected from C₃₋₆-alkyl, which may be straight or branched chain; C₂₋₄-alkenyl; cyclohexyl; phenyl; naphtha-1-yl or naphtha-2-yl, each of which is optionally substituted as defined in claim 1.

7. (currently amended): A phthalocyanine compound according to Claim 6 wherein J is phenyl, optionally substituted ~~as defined in claim 1~~.

8. (currently amended): A phthalocyanine compound according to Claim 6 or 7 wherein the substituent(s) for the phenyl; naphtha-1-yl or naphtha-2-yl groups represented by J is(are) independently selected from C₁₋₂-alkyl; C₁₋₂-alkoxy; C₁₋₂-alkylthio; C₁₋₂-alkylsulphonyl; C₁₋₂-alkylsulphoxide; amino; mono- and di-

C₁₋₂-alkylamino; halogen; nitro; cyano; hydroxycarbonyl, hydroxysulphonyl, dihydroxy-phosphonyl, hydroxycarbonyl-C₁₋₃-alkyl, hydroxysulphonyl-C₁₋₃-alkyl and dihydroxy-phosphonyl-C₁₋₃-alkyl and C₁₋₂-alkyl esters thereof.

9. (currently amended): A phthalocyanine compound according to ~~any one of claims 6 to 8~~ Claim 6 wherein the optionally substituted phenyl; naphtha-1-yl or naphtha-2-yl groups represented by J are selected from phenyl, 4-methylphenyl, 2-methylphenyl, 4-i-propylphenyl, 2,4-dimethyl-phenyl, 2,5-dimethylphenyl, 3,5-dimethylphenyl, 4-methoxyphenyl, 4-methylthiophenyl, 3-(2-[methoxycarbonyl]ethyl)phenyl, 3-(hydroxycarbonyl)phenyl, 4-(hydroxysulphonyl)-phenyl, 2-chlorophenyl, 4-bromophenyl, 3,5-dichlorophenyl, naphtha-1-yl and naphtha-2-yl.

10. (currently amended): A phthalocyanine compound according to ~~any one of the preceding claims~~ Claim 1 wherein the compound has a formula:



wherein

M is an oxymetal group selected from VO, TiO and MoO;

Pc is the phthalocyanine nucleus;

X is S, Se, Te or NT wherein T is H, C₁₋₄-alkyl or phenyl; and

R is phenyl or naphthyl each of which is optionally substituted by up to 5 groups selected from C₁₋₃-alkyl, C₁₋₃-alkoxy, C₁₋₃-alkylthio, C₁₋₃-alkylsulphonyl, C₁₋₃-alkylsulphonyl-amino, C₁₋₃-alkylsulphoxide, amino, mono- and di-C₁₋₃-alkylamino, halogen, nitro, cyano and hydroxycarbonyl, hydroxysulphonyl, dihydroxyphosphonyl, hydroxycarbonyl-C₁₋₃-alkyl, hydroxysulphonyl-C₁₋₃-alkyl or hydroxyphosphonyl-C₁₋₃-alkyl or C₁₋₃-alkyl esters thereof; or

R & T together form a piperidinyl, piperazinyl, morpholinyl or pyrrolinyl ring.

11. (currently amended): A phthalocyanine compound according to ~~any one of the preceding claims~~ Claim 1 wherein X is sulphur.

12. (currently amended): A phthalocyanine compound according to ~~any one of the preceding claims~~ Claim 1 wherein each of R¹, R⁴, R⁵, R⁸, R⁹, R¹², R¹³ & R¹⁶ is 4-methylphenylthio and each of R², R³, R⁶, R⁷, R¹⁰, R¹¹, R¹⁴ & R¹⁵ is H.

13. (currently amended): A phthalocyanine compound according to ~~any one of~~ the preceding claims Claim 1 wherein M is VO.

Claims 14 – 17 (cancelled)

18. (original): A method of establishing the authenticity of an article or substrate comprising marking the article or substrate with a mark including a compound according to formula I in claim 1 without the proviso that the compound is not octa-3,6-(phenylthio)VOPc, octa-3,6-(methylthio)TiOPc or octa-3,6-(ethylthio)VOPc and detecting and/or measuring a characteristic absorption of infrared radiation by the mark.

Claims 19 – 21 (cancelled)

22. (original): An ink comprising a compound of formula I in claim 1 without the proviso that the compound is not octa-3,6-(phenylthio)VOPc, octa-3,6-(methylthio)TiOPc or octa-3,6(ethylthio) VOPc.

23. (original): An ink according to Claim 22 also comprising a colorant.

24. (currently amended): An ink according to Claim 22 ~~or Claim 23~~ also comprising an alkoxylated or polyalkoxylated acrylate monomer and a photoinitiator.

Claim 25 (cancelled)

26. (original): A method of establishing the authenticity of an article or substrate comprising marking the article or substrate with a mark including a compound according to formula I in claim 1 without the proviso that the compound is not octa-3,6-(phenylthio)VOPc, octa-3,6-(methylthio)TiOPc or octa-3,6-(ethylthio)VOPc and detecting and/or measuring a characteristic absorption of infrared radiation by the mark.